



## Séminaire / Seminar AMAP



Santiago is currently a CR researcher at UMR AMAP – IRD, Montpellier, France. Working on ecophysiology and functional anatomy, he is interested in understanding ecosystem drought responses using both experimental and modelling approaches.

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**27 JUNE 2024**  
10h00 – 11h00

Salle 201, Bâtiment PS2, CIRAD-UMR AMAP,  
Boulevard de la Lironde  
Visioconference : [Zoom link](#)

# Vulnerability and dynamics of plant biodiversity under drought stress, a multi-scale approach

*presented by*

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### ABSTRACT

Ongoing climate change is disrupting terrestrial ecosystems globally. Among the multiple impacts of climate change on biodiversity, the increase in the frequency and intensity of droughts leads to a dieback of vegetation, as well as a reduction in its capacity to capture atmospheric CO<sub>2</sub>. In this talk, I will provide an overview of my research, which aims at understanding how drought stress affects plants, from the cell level to the landscape distribution of vegetation. I will show how the impacts on the hydraulic apparatus have a major implication on plant survival. As such, hydraulic traits can help us to better predict plant mortality and distributional shifts under increasing aridity. A special focus of the presentation will be given to the leaves, important organs that carry out the gas exchanges between the plant and the atmosphere. I will present current research on the estimation of water loss after stomatal closure, which has major implications to foresee water depletion. Finally, I will open discussions on my upcoming research projects and collaboration with the local ecophysiology community.

### KEY WORDS

drought stress; ecophysiology; hydraulic safety margins; plant hydraulics; stomata

### Invited and animated by:

Dr. Claire FORTUNEL (UMR AMAP)

### Type:

Research results and perspectives

### Oral language:

english / français

### Language of PPT:

english



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